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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,584	09/30/2003	Melissa Ann Clark	030627/267409	9953

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EXAMINER
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FELTON, MICHAEL J

ART UNIT	PAPER NUMBER
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1791

MAIL DATE	DELIVERY MODE
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09/17/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/675,584	<b>Applicant(s)</b> CLARK ET AL.	
	<b>Examiner</b> MICHAEL J. FELTON	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 3,4,8,12-14,20,21,24-27 and 33-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,4,8,12-14,20-21,24-27 and 33-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims **27, 4, 8, 13, 14, 20-26, and 33-44** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jupe et al. (WO 02/069745 A1) in view of Tateno et al. (US 4,889,144).

5. Regarding claims 27, Jupe et al. disclose a multi-segment cigarette filter comprising a plug-space-plug arrangement consisting of a fibrous tow filter adjacent to

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the tobacco rod (figure 1, element 18) followed by an adsorbent bed (figure 1, element 20), followed by a fibrous tow filter segment (fig. 1, element 26) containing a flavor releasing component (figure 1, element 27). Jupe et al. disclose that the plug wraps and tipping paper may be used (page 9, paragraph 2), and it is conventional in the art that the filter segment is first wrapped with a plug wrap and then connected with the tobacco rod using tipping paper. It would have been obvious to one of ordinary skill in the art at the time of invention that the filter of Jupe et al. would have been constructed with such a plug wrap and tipping paper.

6. Although Jupe et al. disclose that the filter segment downstream from the adsorbent bed is made of tow and should contain a flavor bearing ribbon or thread, it would have been obvious to one of ordinary skill in the art at the time of invention that other flavor releasing filter segment could be used in place of the thread containing section. For instance, Tateno et al. disclose a flavor releasing cigarette filter segment consisting of an outer annular filter tow with an inner cavity containing ruptureable capsules between two inner fibrous plugs (see figures 1 and 3). It would have been obvious to one of ordinary skill in the art at the time of invention that the flavored filter segment of Tateno et al. could have been used in place of the flavored ribbon containing segment in the filter of Jupe et al. Doing so would have extended the storage life of the cigarette of Jupe et al. as flavors contained in capsules are generally more stable than flavors adsorbed on fibers (see discussion by Tateno et al., col. 1, 10-51).

7. Regarding claim 4 and 33, Jupe et al. disclose that the upstream filter (proximal to the tobacco rod) is composed of cellulose acetate tow (page 7, paragraph 3). Tateno et

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al. do not expressly disclose that the outer and inner filter segments are composed of cellulose acetate, but do state:

A filter tip for enclosing flavor-sealed particles according to the present invention may be prepared by arranging in parallel a certain amount of synthetic fibers such as polyacetate and polyester, or of natural fibers such as pulp and cotton, which are normally employed in conventional tobacco filters, and providing a space for enclosing the flavor-sealed particles therein. (col. 3, 6-19)

8. It would have been obvious to one of ordinary skill in the art at the time of invention that it would have been obvious to use the same filter material as specified by Jupe et al. (cellulose acetate). Furthermore, it is notoriously well known in the art that plasticized cellulose acetate tow (with plasticizers such as triacetin) is used as the conventional filter material in the art.

9. Regarding claim 8, Jupe et al. disclose that the multi-component filter is 34 mm long (page 11, paragraph 3).

10. Regarding claims 13, 14, 36, 37, and 38, Jupe et al. disclose the adsorbent bed should contain 90-120 mg (page 11, paragraph 2) of activated carbon particles (i.e. granules) with a mesh size from 10 to 70 are contained in the adsorbent bed (page 8, paragraphs 2 and 3).

11. Regarding claim 21, the capsules of Tateno et al. contain an inner flavoring liquid (L-menthol, see example 1) and a diluting agent (corn starch, example 1; and col. 2, 51-59), surrounded by a gelatin shell (calcium alginate gel, see example 1).

12. Regarding claims 20, 24, 25, 26, 34, 39, Tateno et al. disclose spherical capsules (see figures) that have sizes between 1.8 and 5 mm, and preferable 2.5 to 5 mm in diameter (col. 2, 14-29). The capsules contain flavor materials such as, mint,

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cinnamon, menthol and vanilla (col. 2, 35-50). The examiner considers mint, cinnamon, and menthol as breath freshening agents (i.e. they are used in commonly sold breath fresheners). The volatile flavors disclosed would inherently affect the composition of smoke produced by the filtered cigarette.

13. Regarding claim 40, example 1 of Tateno et al. indicate that 1.5 parts of L-menthol are added to 26.5 parts of other, non-water ingredients. This results in particles that contain about 5% L-menthol. Furthermore, should the examiner's calculations not be correct, it would have been obvious to change the amount of flavoring to obtain various amounts to flavor the cigarette smoke because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA).

14. Regarding claim 41, the filter of Tateno et al. (the mouth end filter or 1st filter section as instantly claimed) would inherently have a lower particulate removal efficiency than the filter proximal to the tobacco rod, because the filter of Tateno et al. has a cavity within it that would not contribute to filtration.

15. Regarding claims 42-44, Jupe et al. disclose that the tobacco side filter segment (called the 2<sup>nd</sup> filter segment in the instant application) and the mouth side filter segment would have different particulate removal efficiencies, and in particular, the mouth side filter would preferably have a low particulate efficiency, "with the denier and grand total denier being selected such that the desired total RTD of the multi-component filter is achieved." Although Jupe et al. do not disclose the particular denier per filament for the mouth side or tobacco side filter segment, it would have been obvious to one of ordinary

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skill in the art at the time of invention to select a high denier per filament in order to produce a filter segment with low particulate removal efficiency as disclosed by Jupe et al. while allowing the tobacco side filter to remove more particulates before the filter segments.

16. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jupe et al. (WO 02/069745 A1) and Tateno et al. (US 4,889,144) as applied to claim 37 above, and further in view of Jones et al. (US 5,307,823). Jupe et al. does not disclose the activity of the activated carbon to be used. However, it would have been obvious to one of ordinary skill in the art at the time of invention to use activated carbon with activities between 60 and 150. For instance, Jones et al. disclose that activated carbon to be used in a cigarette should have carbon tetrachloride activities between 20 and 150% (col. 2, 22-25). It would have been obvious that activated carbon would have been available with activities in this range and that higher activity carbon would have been advantageous as it would have the ability to remove more unwanted and unhealthy cigarette smoke components.

17. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jupe et al. (WO 02/069745 A1) and Tateno et al. (US 4,889,144) as applied to claim 27 above, and further in view of Berger (US 4,046,063). Jupe et al. and Tateno et al. do not disclose crimping the filter element. Berger discloses a cigarette with a filter element that is an outer cylindrical shape and an inner filter member made from steam bonded

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cellulose acetate (see figure 1 below regarding shape, col. 6, 2-9 and col. 3, 34-53 regarding steam bonding and cellulose acetate). The inner filter member has a cavity that has a cylindrical end and a conical end and on the other side of the conical end is a crimped structure in the shape of a cross. It would have been obvious to one of ordinary skill in the art at the time of invention to use the crimped structure of Berger, filled with the flavor capsules of Tateno et al. in the filter of Jupe et al. Berger provides motivation for inserting active ingredients within the crimped portion because, Berger incorporates by reference US 3,533,416 (to Brooks and Berger), that contains adsorbents or smoke-modifying materials in a similar cavity to Berger.

### ***Conclusion***

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL J. FELTON whose telephone number is (571)272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip C. Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J. F./  
Examiner, Art Unit 1791

/Philip C Tucker/  
Supervisory Patent Examiner, Art Unit 1791